

were compared and settled through consensus. A random-effects meta-analytic model was applied in all calculations. Jadad's scale assessed study quality of reporting. **RESULTS:** A total of 50 potential studies were identified. Thirty-five were excluded and 15 were evaluated. Quality of reporting of included studies was on average $59 \pm 24\%$. All three drugs showed beneficial effects in preventing all SREs over placebo in cancer patients with bone metastasis. Zoledronate was the pharmacological strategy reporting the lowest relative risk (RR = 0.67; CI95% = 0.55, 0.81; N = 695), followed by pamidronate (RR = 0.79; CI95% = 0.71, 0.88, N = 1951), and clodronate (RR = 0.87; CI95% = 0.75, 1.00; N = 681). However, no clear advantage of one drug over the others was observed since confidence intervals overlapped substantially. All targeted bisphosphonates showed no benefits over placebo in reducing the number of deaths in a 12-month period ($p > 0.05$). **CONCLUSION:** Clodronate, pamidronate, and zoledronate are able to reduce the morbidity of patients with bone metastasis in regards to SREs but not overall mortality.

PCN6**ESTIMATION OF THE EPIDEMIOLOGICAL EFFECT OF TRASTUZUMAB OVER 10 YEARS IN 5 EUROPEAN COUNTRIES**Weisgerber-Kriegel U¹, Cirrincione A¹, McNiven P²¹F. Hoffmann-La Roche Ltd, Basel, Switzerland, ²Strategyst Consulting Inc, St. Charles, MO, USA

OBJECTIVE: To assess the potential value of trastuzumab (T) to society, we initially assessed the long-term impact of T treatment in early breast cancer (EBC) on the annual number of patients developing metastatic BC (MBC) from 2005–2015 in five European countries. **METHODS:** Annual EBC incidence for 2003–2015 was projected by applying stage-specific proportions for stages I–III, according to regional registry data, to published female BC incidence rates from 1990–2002. Age-specific rates for 2002 were then applied to United Nations 2003–2015 population projections. The annual number of patients with HER2-positive MBC includes de novo MBC incidence plus patients with BC recurrence. The baseline 10-year recurrence rate for standard treatment was estimated as 37%, based on 4-year follow-up in the control arm of a combined trial analysis in patients with HER2-positive BC and the long-term timing of recurrence in all patients with BC. To model recurrence in T-treated EBC patients, the hazard ratio at median 1-year follow-up in the HERA trial (0.49; 95% confidence interval [CI]: 0.38, 0.63) was applied, resulting in an estimated 10-year recurrence rate of 18.1% (95% CI: 14.0, 23.3). **RESULTS:** In 2004, prior to T approval for EBC, the pool of de novo and relapsed MBC patients was estimated at 16,156. Between 2005 and 2015, the model predicts that T treatment will result in an annual decline of 2.5% (95% CI: 1.7, 3.2). The total number of patients prevented from developing metastases over 10 years is projected to be 27,727 (95% CI: 20,116, 33,709). **CONCLUSION:** T is expected to prevent nearly 28,000 women from developing MBC over a 10-year period in five countries alone and should considerably reduce the health resource burden of MBC treatment.

PCN7**ANALYSIS OF MASTECTOMY IN BREAST CANCER TREATMENT**

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OBJECTIVE: Surgery is main treatment used in most early breast cancer cases; surgery is the primary treatment for breast cancer to remove as many as cancer cells as possible. There are two types

of surgeries: mastectomy and lumpectomy. Studies have shown that mastectomy is the most performed in comparison to lumpectomy. With our data, out of 1485 cases of breast cancer, 146 were primarily treated by mastectomy while only 26 were treated with lumpectomy. We analyzed, in detail, the information on mastectomy as a treatment option for breast cancer to compare the use of different types of mastectomy and to study the cost of the most frequent types. **METHODS:** We used the 2004 data from the National Inpatient Sample (NIS). We first filtered the data with respect to the main types of mastectomy: radical mastectomy, modified radical mastectomy, simple (total) mastectomy, and the subcutaneous mastectomy. Second, we analyzed them with summary statistics using SAS, and then finally, we looked at the cost of the most frequent by plotting the actual costs and the future trend. We used SAS Text Miner to compress patient diagnoses, and compare them to the types of treatment. **RESULTS:** The modified radical mastectomy is the most frequently used in treating breast cancer with 81.5% of the total mastectomies. Then, we have the simple (total) mastectomy with 13.7%. Finally, we have the subcutaneous mastectomy (2.7%) and the radical mastectomy (2.1%). The cost of the modified radical mastectomy has a constant trend of around \$20,000. **CONCLUSION:** The modified radical mastectomy is the most performed so far in the treatment of breast cancer by mastectomy. SAS can be used to study health care cases.

PCN8**IMPROVED SURVIVAL OF PATIENTS WITH GLIOBLASTOMA MULTIFORME BY TEMOZOLOMIDE AS ADJUVANT THERAPY: A RETROSPECTIVE COHORT STUDY**Wang TH¹, Wei KC², Wang JD³¹Taiwan Centers for Disease Control, Taipei, Taiwan, Taiwan,²Chang-Gung Memorial Hospital, Taipei, Taiwan, Taiwan,³National Taiwan University, Taipei, Taiwan

OBJECTIVE: Glioblastoma multiforme (GBM) accounts for 35% of primary brain tumor in Taiwan. The objective of this study is to determine if patients with GBM survived longer after adjuvant therapy by temozolomide. **METHODS:** We collected all inpatients of GBM verified with pathology in Chang Gung Memorial Hospital from January 2001 to March 2006. Patients aged more than 80 at diagnosis were excluded. Outcome was followed until December 31, 2006. Survival analysis was performed by Kaplan-Meier estimation method and Cox regression model and explores the effect related to various prognostic factors including adjuvant therapy of temozolomide. **RESULTS:** There were 66 temozolomide users and 133 non-users during the study period. They were no statistical significant differences on gender, age at diagnosis and year of diagnosis between these two groups. Analysis showed 50% survival for users and non-users were 18.7 and 9.9 months, respectively (Log-rank test, $p < 0.0001$). The hazard ratio was 2.58 (95% confidence interval, 1.60–4.16) for the aged 60–80 compared with patients aged 20–40, and that of temozolomide treatment was 0.47 (.34–.66). Stratified analysis showed that there was no significant difference in survival between patients with concomitant radiotherapy. **CONCLUSION:** The adjuvant therapy with temozolomide seemed to improve survival, but randomized trial is still needed to test this hypothesis.